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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,269	09/20/2001	Christine Brauer	170135.401	5382

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EXAMINER

MAYES, MELVIN C

ART UNIT PAPER NUMBER

1734

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/960,269	<b>Applicant(s)</b> BRAUER, CHRISTINE	
	<b>Examiner</b> Melvin Curtis Mayes	<b>Art Unit</b> 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29-59 is/are pending in the application.  
4a) Of the above claim(s) 49-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-43, 46 and 48 is/are rejected.
- 7) ☒ Claim(s) 44, 45 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/15/03</u> . | 6) <input type="checkbox"/> Other: ____  |

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**DETAILED ACTION**

***Election/Restrictions***

(1)

Applicant's election of Claims 29-48 in the reply filed on June 8, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Specification***

(2)

The disclosure is objected to because of the following informalities: antecedent basis is not provided in the specification for the subject matter claimed in Claims 30-48. This subject matter should be added to the specification without adding any new matter.

Appropriate correction is required.

***Claim Objections***

(3)

Claim 39 is objected to because of the following informalities: it should read "between 15 and 70 MPa as in original Claim 11. Appropriate correction is required.

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***Claim Rejections - 35 USC § 103***

(4)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(4)

Claims 29-32, 35, 37, 39-41, 43, 46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-47759 or in view of JP 9-47759 in view of DE 19700354.

JP 9-47759 discloses a method of making adsorbent for wastewater treatment comprising: using plastic waste to produce adsorbent in the form of granular powder, pellet, fibrous, cylinder. The plastic can be olefin resin such as polyethylene or polypropylene, either independent (individually) or combined. The adsorbent has a surface area of more than 2 cm<sup>2</sup>/g and mean particle diameter of 0.5-10 mm (abstract and computer translation [0013]-[0020]).

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DE 19700354 teaches that plastic recyclable waste can be formed into granular carrier material of any desirable size and any shape for use in wastewater cleaning (Abstract and oral translation).

Providing the plastic waste in the method of JP 9-47759 as pre-sorted waste would have been obvious to one of ordinary skill in the art to only provide waste comprising polyethylene and/or polypropylene for making the granular adsorbent.

Further, it would have been obvious to one of ordinary skill in the art to have provided the plastic waste in the method of JP 9-47759 as pre-sorted plastic recyclable waste, as taught by DE 19700354, as suitable for forming into granular material for use in waste water cleaning.

(5)

Claim 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-47759 or the references as applied to claim 29 above, and further in view of JP 8-299977.

JP 8-299977 teaches that a resin pellet of polyethylene and polypropylene and having good purifying performance for waste water treatment is formed in the shape of a star-like columnar body having a cavity hole penetrating in the longitudinal direction of the body (Abstract and computer translation).

It would have been obvious to one of ordinary skill in the art to have modified the method of JP 9-47759 or the references as combined for making adsorbent from polyethylene and/or polypropylene from plastic waste by providing the pellet adsorbent with a star-like (i.e. structured) surface and with a cavity hole, as taught by JP 8-299977, to provide a wastewater treatment pellet of good purifying performance. By providing each pellet with a cavity hole, each pellet is in the form of a sleeve, as claimed in Claim 34.

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(6)

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-47759 or the references as applied to claim 29 above, and further in view of Della Riva 5,170,911.

Della Riva teaches that a material particularly suitable for manufacture of bottles is polyethylene but it is possible to use polypropylene or other plastic material which can be recycled without releasing toxic gases (col. 5, lines 26-32).

It would have been obvious to one of ordinary skill in the art to have modified the method of JP 9-47759 or the references as combined for making adsorbent from polyethylene and/or polypropylene from plastic waste by using plastic waste comprising polyethylene and/or polypropylene bottles, as taught by Della Riva, as materials of which bottles are manufactured and which can be recycled without releasing toxic gases. The use of polyethylene and/or polypropylene bottles to provide the plastic waste for making the polyethylene and/or polypropylene adsorbent would have been obvious to one of ordinary skill in the art to provide waste which can be recycled to make adsorbent.

(7)

Claims 38 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-47759 or the references as applied to claim 29 above, and further in view of Aylmore 5,783,066.

Aylmore teaches that pellets for treating waste water are provided with a roughened surface which provides cavities within which the biomass can be retained for effective filtration and may be formed of density so as to float on the surface of the water being treated or of density slightly greater than water (Abstract and col. 1, lines 49-60).

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It would have been obvious to one of ordinary skill in the art to have modified the method of JP 9-47759 or the references as combined for making granular adsorbent from polyethylene and/or polypropylene from plastic waste by providing the adsorbent with density less than water, as taught by Aylmore, to provide pellets (adsorbent) for waste water treatment which float on the surface of the water being treated. Providing the granular adsorbent with density as claimed would have been obvious to one of ordinary skill in the art to provide it with density less than that of water ( $1 \text{ g/cm}^3$ ) so as to float on the wastewater.

It would have been obvious to one of ordinary skill in the art to have modified the method of JP 9-47759 or the references as combined for making granular adsorbent from polyethylene and/or polypropylene from plastic waste by providing the adsorbent with cavities, as taught by Aylmore, within which the biomass can be retained to achieve effective filtration. Providing the volume of cavities as claimed would have been obvious to one of ordinary skill in the art to achieve effective filtration.

***Allowable Subject Matter***

(8)

Claims 44, 45 and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Conclusion**

(9)


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(10)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 571-272-1234. The examiner can normally be reached on Mon-Fri 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Melvin Curtis Mayes  
Primary Examiner  
Art Unit 1734

MCM  
August 17, 2004